

**Please replace the last paragraph on page 1 with the following:**

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B2  
Such a state transition method and arrangement to perform such a state transition are already known in the art, e.g. from *the temporary document WH-031 submitted on June 29, 1998 to ITU Study Group 15 which is an ADSL (Asymmetric Digital Subscriber Line) forum. This document with reference WH-031 is entitled 'Time Domain Rate Adaptation Based L1 State for C. Lite Modem Power Down Management' and originates from IteX.* In this document, a mechanism for transition between a so called L1 state, a low power/low bit rate state, to a so called L0 state, a full power/full bit rate state, of an ADSL (Asymmetric Digital Subscriber Line) system is described. AS is indicated in paragraph 2 of the cited document, transition between the low power and the full power state is initiated by transfer of a predetermined recognizable state transition indication, called EOC message. Thereafter, the new state is entered at the beginning of the next super-frame. The transition time to switch from the low power state to the full power state is not minimized in the known solution because the actual transition from the low power state to the full power state is delayed until the beginning of the next super-frame. In particular systems such as the known one, wherein data are transferred at a low bit rate during the low power state, the transition time can become significantly large, i.e. several multiples of the time interval required to transfer a super-frame at full power. In communication systems with buffers temporarily storing data, large state transition times imply increased probability for buffer overflow, congestion and even loss of data. If for instance ATM (Asynchronous Transfer Mode) cells have to be transferred over an ADSL (Asymmetric Digital Subscriber Line) network

B<sup>2</sup> segment, risk of ATM buffer overflow increases if the wake-up time, i.e. the transition time from the low power state to the full power state of the ADSL network segment is large.

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An object of the present invention is to provide a method and arrangement for transition from the low power state to the full power state similar to the known one, but wherein the wake-up time to go from the low power state to the full power state is minimized.

B<sup>3</sup> [Please replace the second full paragraph on page 2 with the following:]

According to the invention, this object is achieved by the method to transit in a communication system from a low power state to a full power state and an arrangement to transit from the low power state to the full power state in a receiver.

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**Please replace the second full paragraph of page 3 with the following:**

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B<sup>4</sup> An additional feature of the transition method from low power to full power state is that a state transition indication is transferred from the transmitter to the receiver before a copy of the currently transferred data packet is transmitted at full power.

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**Please replace the last paragraph of page 6 which continues onto page 7 with the following:**

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B<sup>5</sup> In the ADSL receiver RX, the state transition indication detector STID monitors the entrance of the ADSL receiver RX when this ADSL receiver RX operates in the low power state. The state transition indication detector STID for example uses correlation techniques to recognize the predetermined state from the low power state LPS to the full power state FPS. As soon as the state transition indication detector DET recognizes the state transition indication STI,

it activates the control unit CTRL and the interrupted symbol detector DET via control signals.

B5 The interrupted symbol detector DET detects the incompletely transmitted DMT symbol DMT1 that will be deleted by the interrupted symbol deletion device DEL, the control unit CTRL instructs the DMT receiver RXM to enter the full power state FP5 wherein it is able to receive subsequent DMT symbols C\_DMT1, DMT2 at full power / full bit rate.

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**Please replace the first full paragraph on page 7 with the following:**

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B6 It is remarked that the functionality of the interrupted symbol detector DET and the interrupted symbol deletion device DEL may in an alternative embodiment of the present invention be integrated with the DMT receiver RXM into a single device. Indeed, the detection and deletion of incompletely transferred DMT symbols may be realized in hardware or in software and evidently can be integrated in the DMT receiver RXM.

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**Please replace the second full paragraph on page 7 with the following:**

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B7 It is also noticed that in an alternative version of the current invention, the average transition time from the low power state LPS to the full power state FPS is even more reduced by interrupting transmission of the currently transferred low power DMT symbol DMT1 only if that part of the DMT symbol DMT1 that has already been transmitted has not yet exceeded a certain threshold. Thus, the symbol DMT1 can be transferred at low power. This implementation of the present invention minimizes the average wake-up time to go from the low power state LPS to the full power state FPS at the cost of some additional complexity in the ADSL transmitter TX to determine the portion of the DMT symbol DMT1 that already has been transferred and to compare this portion with a certain threshold.

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**Please replace the first full paragraph on page 8 with the following:**

B<sup>2</sup>  
Although it has been mentioned in the introductory part of this patent application, it is emphasized here that to implement the basic idea of the present invention, i.e. interrupting low power transmission of the currently transferred DMT symbol and full power transmission of a copy C\_DMT1 of the interrupted DMT symbol DMT1, it is required to generate, transfer and detect a state transition indication STI. Such a state transition indication STI helps the receiver RX detect the moment whereon it has to transit from the low power state LPS to the full power state FPW, but must for example not be sent in a system wherein the receiver RX is able to detect the difference between a low power DMT symbol DMT1 and a full power DMT symbol DMT2 and is able to autonomously switch from the low power mode LPS to the full power mode FPS thereupon.

**Please delete page 9 in its entirety.**

**IN THE CLAIMS:**

**Please enter the following amended claims:**

Q9  
Sub  
C1  
1. (Currently Amended) A method to transit in a communication system including a transmitter, a communication medium and a receiver, from a low power state to a full power state, said method comprising:

transferring data packets from said transmitter to said receiver at low power,

wherein low power transmission of a currently transferred data packet is interrupted, and a copy of said currently transferred data packet is transmitted at full power.